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## GSA Annual Meeting in Denver, Colorado, USA - 2016

Paper No. 166-3

Presentation Time: 9:00 AM-6:30 PM

# SPECTRAL INVESTIGATION OF QUADRANGLE AC3 OF THE DWARF PLANET CERES – THE REGION OF IMPACT CRATER DANTU

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The 126 km large impact crater Dantu and its ejecta blankets dominate major part of quadrangle 3 (Ac3) of dwarf planet Ceres, which is located between 21-66 °N and 90-180 °E in a large depression north of the impact basin Kerwan [1]. A detailed analysis of the surface composition of this area is performed based on data acquired by the Framing Camera (FC) and the Visible and Infrared Spectrometer (VIR) of the Dawn spacecraft. Key topics of our spectral investigation are the detailed characterization of the Dantu crater in combination with its complex geology and topography presented in [1] and the influence of this impact event on the spectral properties of the entire region. We discuss the origin of Dantu's spectral properties, which appear to be unique compared to other large impact features on Ceres and its connection to the extended region of neither blue nor red material on Ceres [2]. [1] Kneissl et al. (2016): Geologic mapping of the Ac-H-3 Dantu quadrangle of Ceres from NASA's Dawn mission. 47<sup>th</sup> LPSC. Abstract #1967. [2] Stephan et al. (2016 in prep.): The investigation of the spectral nature of the bluish material on Ceres.

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